

DETAILED ACTION

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Nathan E. Stacy on 4/20/2010.

The application has been amended as follows in the claim:

19. (Currently amended): An article of manufacture comprising:

a non-transitory computer readable medium having a readable program code embodied therein for managing resource usage, the readable program code further comprising:

a code causing a controller to push commands indicating accesses of at least one resource onto at least one resource queue;

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a code causing the controller to monitor for a predefined level of resource consumption;

a code causing the controller to prevent issue of subsequent commands from a client of at least one client to a server of at least one server in response to a command from the client to the server that increases resource consumption to the predefined level;

a code causing the controller to identify the client and the server for which the command increases resource consumption to the predetermined level as a client/server combination identifier;

a code causing the controller to push the client/server combination identifier onto a waiting queue associated with a resource for which the resource consumption is increased to the predetermined level, the waiting queue for queuing a plurality of client/server combination identifiers;

a code causing the controller to detect a decline in consumption of a resource of the at least one resource;

a code causing the controller to pop a client/server combination identifier from a waiting queue associated with the resource for which a decline in consumption is detected in order of queuing; and

a code causing the controller to enable issue of commands from the client to the server designated by the popped client/server combination identifier.

Allowable Subject Matter

Claims 1-21 are allowed. The following is an examiner's statement of reasons for allowance the prior art does not teach or fairly suggest in claims 1, 8, 15, and 19:

Claim 1: identifying the client and the server for which command increases resource consumption to the predetermined level as a client/server combination identifier; and the waiting queue for queuing a plurality of client/server combination identifiers.

Claim 8: detects a condition of an adapter that issues a command to a LUN that contributes to the predetermined resource consumption condition, identifying the adapter that issues the command, and a waiting queue for queuing a plurality of adapter/LUN combination identifiers.

Claim 15: detects a condition of a source that issues a command to a client that contributes to the predetermined resource consumption condition, identifying the source that issues the command, and a waiting queue for queuing a plurality of client/server combination identifiers.

Claim 19: a code causing the controller to identify the client and the server for which command increases resource consumption to the predetermined level as a client/server combination identifier; and the waiting queue for queuing a plurality of client/server combination identifiers.

Further, the combination of the set forth limitations with all of the other limitations in the respective independent claims (claims 1, 8, 15, and 19) are not obvious. Applicant has argued this limitation on pages 11-16, of Applicant's Remarks filed 1/21/2010. This limitation finds support in the specification on page 11. The prior art of record neither anticipates nor renders obvious the above recited combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hyun Nam whose telephone number is (571) 270-1725. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Henry Tsai can be reached on (571) 272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Henry W.H. Tsai/

Supervisory Patent Examiner, Art Unit 2184